

**Amendments to the Claims:** This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Currently Amended) An anti-microbial polymeric film comprising a polymeric substrate layer having a surface, and on said surface a polymeric coating having a thickness of from about 0.01 to about 14.0  $\mu\text{m}$  and comprising an anti-microbial compound in an amount of from about 0.1 to about 50% by weight of the coating layer, wherein said coating provides either one or both:

(i)-a heat-seal strength of from 100 g/in to 2500 g/in when heat sealed to itself and  
(ii)-a barrier to either one or both of water vapor and oxygen, such that the said barrier to water vapor providing a water vapor transmission rate is in the range of 0.01 to 10g/100 inches<sup>2</sup>/day and said barrier to the oxygen providing an oxygen transmission rate is in the range of 0.01 to 10 cm<sup>3</sup>/100 inches<sup>2</sup>/day/atm, wherein the polymer of the polymeric coating is selected from the group consisting of PVDC, PCTFE, PE and PP.

2. (Previously Presented) The anti-microbial film according to claim 1 wherein the anti-microbial compound is in particulate form.

3. (Previously Presented) The anti-microbial film according to claim 1 or 2 wherein the anti-microbial compound is present in an amount of from about 0.1 to about 5%.

4. (Previously Presented) The anti-microbial film according to claim 3 wherein the anti-microbial compound is an inorganic compound comprising a metal or metal ions selected from the group consisting of silver, copper, zinc, tin, mercury, lead, cobalt, nickel, manganese, arsenic, antimony, bismuth, barium, cadmium, chromium, and combinations thereof.

5. (Previously Presented) The anti-microbial film according to claim 3, wherein the anti-microbial compound has the formula  $M^1_aH_bA_cM^2_2(PO_4)_3.nH_2O$  wherein:

$M^1$  is at least one metal ion selected from the group consisting of silver, copper, zinc, tin mercury, lead, iron, cobalt, nickel, manganese, arsenic, antimony, bismuth, barium, cadmium and chromium;

A is at least one alkali or alkaline earth metal ion;  
 $M^2$  is a tetravalent metal ion;  
a and b are positive numbers and c is 0 or a positive number such that  $(ka+b+mc)=1$ ;  
k is the valence of metal  $M^1$ ;  
m is the valence of metal A; and  
 $0 \leq n \leq 6$ .

6. (Previously Presented) The anti-microbial film according to claim 3 wherein the anti-microbial compound has the formula  $Ag_aH_bA_cZr_2(PO_4)_3.nH_2O$  wherein:

A is an alkali or alkaline earth metal ion;  
a, b and c are positive numbers such that  $(a+b+mc)=1$ ;  
m is the valence of metal A.

7. (Previously Presented) The anti-microbial film according to claim 5 wherein a is in the range of 0.1 to 0.5.

8. (Previously Presented) The anti-microbial film according to claim 5 wherein b is at least 0.2.

9. (Previously Presented) the anti-microbial film according to claim 5 wherein A is a sodium ion and m is 1.

10. (Previously Presented) the anti-microbial film according to claim 4 wherein the anti-microbial compound comprises at least one element selected from the group consisting of silver, copper, or zinc.

11-13. (Cancelled)

14. (Previously Presented) The anti-microbial film according to claim 1 wherein haze in-the film is less than about 15%.

15. (Previously Presented) The anti-microbial film according to claim 2 wherein a volume distributed mean particle diameter of the anti-microbial particles is in the range of 1.0 to 3.0 $\mu$ m.

16. (Previously Presented) The anti-microbial film according to claim 2 wherein the coating has a thickness and said thickness is in the range of 70 to 130% of a volume distributed mean particle diameter of the anti-microbial particles.

17. (Previously Presented) The anti-microbial film according to claim 2 wherein the thickness of the coating is less than a volume distributed mean particle diameter of the anti-microbial particles.

18. (Previously Presented) The anti-microbial film according to claim 1 wherein said polymeric substrate is selected from the group consisting of polyester, polyolefin, polyamide and PVC.

19. (Previously Presented) The anti-microbial film according to claim 1 wherein said polymeric substrate comprises polyester.

20. (Previously Presented) The antimicrobial film according to claim 1 wherein said polymeric substrate comprises polyethylene terephthalate.

21. (Previously Presented) The antimicrobial film according to claim 1 wherein said polymeric substrate has a degree of shrinkage in one or both dimensions of about 10% to about 60% when placed in a water bath at 100°C for 30 seconds.

22. (Previously Presented) The antimicrobial film according to claim 1 having a 60° gloss of at least 70.

23. (Canceled)

24. (Previously Presented) The anti-microbial film according to claim 6 wherein a is in the range 0.1 to 0.5.

25. (Previously Presented) The anti-microbial film according to claim 6 wherein b is at least 0.2.

26. (Previously Presented) The anti-microbial film according to claim 6 wherein A is a sodium ion and m is 1.

27. (Previously Presented) The anti-microbial film according to claim 17 wherein the thickness of the coating is in the range of 70 to 99% of the volume distributed mean particle diameter of the anti-microbial particles.

28. (Currently Amended) The anti-microbial film according to claim 1 wherein said polymeric coating layer further provides ansaid oxygen transmission rate in the range of 0.01 to 10 cm<sup>3</sup>/100 inches<sup>2</sup>/day/atm.

29. (New) The anti-microbial film according to claim 1 wherein said polymeric coating further provides a heat-seal strength of from 100 g/in to 2500 g/in when heat-sealed to itself.

30. (New) The anti-microbial film according to claim 1 wherein the polymeric coating provides said water vapor transmission rate in the range from 0.01 to 10 g/100 inches<sup>2</sup>/day.

31. (New) The anti-microbial film according to claim 1 wherein the polymeric coating provides said water vapor transmission rate in the range from 0.01 to 10 g/100 inches<sup>2</sup>/day and said oxygen transmission rate in the range of 0.01 to 10 cm<sup>3</sup>/100 inches<sup>2</sup>/day/atm.